

TYPES of blood cancer TREATMENTS

WHAT YOU NEED TO KNOW

You or your loved one has been diagnosed with a type of blood cancer. Cancer treatment can be complex, with different types of treatment options available for some blood cancers. What are they and how do they work?

This fact sheet will help you:

- Learn about the different treatment options available
- Understand each type of treatment and how it can help
- Prepare questions to ask your healthcare team



Factors that affect treatment

Discuss your treatment options with your doctor to make sure you understand the benefits and risks of each approach. Your treatment plan is based on:

- Your age and overall health status
- The kind of blood cancer you have
- Your medical history
- Results from your lab tests and physical exam
- Your prognosis (the likely outcome of the disease)



During your journey, there are many treatment options that your doctor may suggest.

Treatment options

Below, you'll find a short description of each treatment type or category. For more information on a specific type of blood cancer treatment, please visit [bloodcancers.ca](https://www.bloodcancers.ca).

▶ Immunotherapy	▶ Radiation therapy
▶ Watch and wait (active surveillance)	▶ Blood and marrow stem cell transplant
▶ Chemotherapy and other drug therapies	▶ Blood transfusion

Immunotherapy

About immunotherapy

Doctors and researchers are learning to manage the immune system to destroy cancer cells. Immunotherapy is a type of cancer treatment that improves your immune system's ability to detect and attack cancer cells. This approach is effective for certain blood cancers, but not all can be treated with immunotherapy.

What you need to know

Immunotherapy treatments work in different ways. Some boost your body's immune system. Others help train your immune system to attack specific cancer cells.

Cancer and the immune system

- Scientists believe the body recognizes and destroys many abnormal cells before they become cancer
- Even a healthy immune system can't always prevent cancers from forming
- Sometimes cancers can bypass the immune system and multiply
- Cells can go through genetic changes that allow them to avoid being detected and destroyed
- Immunotherapy activates or reactivates the immune system to attack and destroy cancer cells that have not been detected

Types of immunotherapy treatments


There are a few types of immunotherapy treatments for blood cancers currently in use or being studied:

- **Chimeric Antigen Receptor (CAR) T** — cell therapy uses your own immune cells (T-cells) to detect and kill cancer cells.
- **Monoclonal antibodies** — an IV treatment that marks cancer cells to help your immune system destroy them
- **Therapeutic vaccines** — injections that help your immune system recognize and fight cancer cells

The goal of **immunotherapy** is to detect and attack cancer cells.

The science of how immunotherapy works is still new.

People who have immunotherapy usually tolerate it better than chemotherapy.



With blood cancers that can be stable for years, doctors may recommend **watch and wait**.

Several studies have shown that early treatment does not have benefits for low-risk blood cancers. It also does not lengthen your life.

Watch and wait (active surveillance)

About watch and wait

Receiving a blood cancer diagnosis can be upsetting and life changing. You may be worried if your doctor suggests that you wait before starting treatment. Watch and wait is an approach where your doctor monitors your cancer closely and delays treatment until the disease progresses.

What you need to know

- Watch and wait is also known as active surveillance
- You don't get treatment until you need it
- It is often used at the beginning of slow-growing or chronic blood cancers, such as chronic lymphocytic leukemia and some subtypes of non-Hodgkin lymphoma

What happens during watch and wait

During watch and wait, you can follow your normal routine and activities. Your healthcare team will monitor you closely and you will have regular checkups. They will make sure you get treatment if, and when, you need it.

Benefits of delayed treatment

Delaying treatment can offer positive outcomes. You may be able to:

- Maintain your quality of life
- Avoid treatment side effects
- Reduce your risk of building resistance to a drug
- Access new treatment options if they become available



Chemotherapy and other drug therapies

New drugs and new ways of using drugs have improved rates of cure or remission for people living with cancer. Today, there are more than 50 types of drugs being used to treat blood cancers that include a combination of drug therapy.

The goal of drug therapy is to eliminate cancer cells so there is no sign of illness and normal cells are restored. This is when you are in remission.

About chemotherapy

Chemotherapy uses medicine (chemicals) to kill or damage cancer cells. A combination chemotherapy procedure uses two or more chemotherapy drugs. Often called anti-cancer agents, they must be toxic enough to kill cancer cells and to stop them from growing or multiplying. Chemotherapy can be hard on your body because it can harm healthy cells.

With **chemotherapy**, you may experience mild to severe side effects. Most side effects disappear once your treatment ends.

New drugs and therapies can help control side effects. Speak to your doctor.

Benefits of chemotherapy

Treatment has improved and survival rates have greatly progressed over the past 40 years mostly because of chemotherapy drugs. Chemotherapy is often combined with radiation therapy or follows a stem cell transplant. It can produce long-term remission or even a cure for many people.

About other drug therapies

Drugs can be given:

- In a pill, capsule, or liquid form
- Through a tube (catheter or central line) in one of your veins
- In your muscle through an intramuscular injection
- Under the skin through a subcutaneous injection
- Into your spinal canal through intrathecal therapy



Radiation therapy is usually part of a treatment plan that includes drug therapy.

It's often given over a series of visits, spread out over several weeks.



Radiation therapy

About radiation therapy

Radiation therapy (also known as radiotherapy) uses x-rays or other high-energy rays that can kill cancer cells. While this type of treatment is not used often, it is one part of the treatment plan for certain types of blood cancers.

What you need to know

Radiation therapy works by damaging the genetic material (DNA) in your cells, preventing them from growing and reproducing. It's directed at cancer cells but can damage nearby healthy cells. Today's methods minimize the impact on nearby tissue, so the benefit of destroying the cancer cells outweighs the risk of harming healthy cells.

In blood cancer treatment, radiation therapy is usually part of a treatment plan that includes drug therapy. Radiation therapy can also be used to relieve pain or discomfort caused by an enlarged liver, lymph node(s), or spleen.

Radiation therapy, either alone or with chemotherapy, can be given as a treatment to prepare you for a blood or marrow stem cell transplant.

Types of radiation therapy

The two most common types of radiation therapy used in treating blood cancers are external beam radiation and radioimmunotherapy. The total amount of radiation used during treatment depends on your overall health, the disease, and the reason for treatment.

Blood and marrow stem cell transplant

About stem cell transplants

Your body depends on stem cells to produce blood cells. With a stem cell transplant, you receive healthy stem cells to replace the ones that have been destroyed by cancer or by high doses of chemotherapy and/or radiation therapy.

The two main types of stem cell transplants used for blood cancers are:

- **Autologous** — The stem cells come from your own body, so you can receive high doses of chemotherapy with or without radiation. The stem cells then restore your bone marrow's ability to make new blood cells and reset your immune system.
- **Allogeneic** — The stem cells come from a healthy person (the donor). They are used to replace stem cells in your bone marrow. This can provide a long-term cure.

A successful allogeneic transplant depends on how well the donor's tissue type matches your own. A blood test is done to look for human leukocyte antigens (HLA): this is known as HLA typing. A close match makes it more likely that a transplant will be successful.

What you need to know

- Often people who have a stem cell transplant have a blood cancer like leukemia, lymphoma, myelodysplastic or myeloproliferative diseases, myeloma, or plasma cell disorders.
- When your cancer or your treatment destroys your stem cells, your body can no longer produce enough new blood cells. You need these cells to live.
- If your bone marrow can't make enough new blood cells, you can have health problems such as infections, bleeding, or low red blood cell count (anemia). These can be serious enough to cause death.
- A stem cell transplant can replace damaged and diseased stem cells with healthy stem cells. It can also restore your bone marrow's ability to make new blood cells.

Deciding if a stem cell transplant is right for you

Your healthcare team will consider several factors to decide if you are a good candidate for a stem cell transplant. This includes your age and overall health, type and stage of blood cancer, history of cancer treatment, how likely your cancer is to respond, and if there is a suitable donor or if you can use your own stem cells. You will undergo medical tests to determine if you are healthy enough to have the procedure.

A stem cell transplant may help a person with blood cancer live longer. It may even cure the cancer.

This treatment comes with risks: not everyone is eligible for it.

Blood transfusion

About blood transfusions

Blood can't be made artificially. Some people living with a blood cancer like leukemia, lymphoma, myeloma, and other blood diseases or disorders rely on blood donated by volunteers. There are three steps in this process:

- **Blood donation** — Blood is collected from a donor. Anyone who is 17 years and older, weighs at least 50 kg (110 pounds), and is in good health can donate blood every 2 months.
- **Preparation of blood components** — Blood products are collected, separated, and stored in plastic bags. Each component must be prepared and carefully stored to be at its best.
- **Blood transfusion** — You receive donated blood through a small tube placed in a vein in your arm. The blood can include red blood cells, platelets, plasma, and cryoprecipitate (frozen blood product prepared from blood plasma).

What you need to know

- Blood transfusion involves giving a person blood by IV, or in the vein.
- The need for a transfusion depends on the type of blood disease and the type of drugs used for treatment.
- Leukemia, myeloma, and many types of lymphoma interfere with the normal production of blood cells. This results in a low blood cell count and a need for a transfusion.
- With a blood or marrow stem cell transplant, blood transfusions are often needed because of the side effects of chemotherapy.

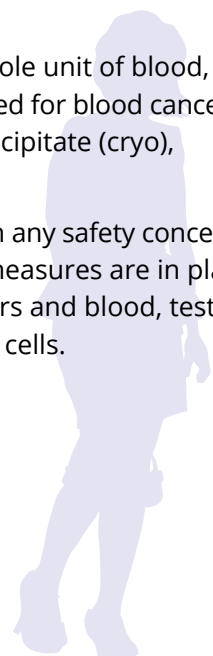
Types of blood transfusions

There are different types of blood transfusions. They can be given as a whole unit of blood, or the components can be separated. Eight types of blood transfusions are used for blood cancers, including white cells, red cells, platelets, granulocytes, plasma and cryoprecipitate (cryo), intravenous gamma globulin (IVIG), albumin, and for palliative care.

Almost every Canadian with leukemia will need a **blood transfusion** as part of their treatment.

Blood transfusions are considered very safe in Canada.

The benefits of transfusion are usually greater than any safety concerns for people living with blood cancer. Many safety measures are in place for blood donation. These include screening donors and blood, testing for infectious diseases, and removing white blood cells.



Questions to ask your healthcare team

Here are some questions you may want to ask:

- Why are you recommending this type of therapy? What is the goal?
- What are the benefits and risks of this therapy?
- How does this therapy work for my cancer?
- How will this treatment be given? How often? For how long? When will it start?
- How will you know if it's working?
- What side effects should I expect during and following my therapy?
How will the side effects be managed?



Developing new and better treatment options

Doctors and researchers are always looking for new and better treatments. **Clinical trials** are research studies that aim to evaluate a medical intervention in human volunteers. The goal is to improve treatment by testing new drugs and therapies to see how safe and helpful they are.

Some clinical trials for cancer search for a cure. Others look to refine existing treatments and improve quality of life for people living with cancer.

Thanks to research and access to better treatments, survival rates for many people living with blood cancer have doubled, tripled, and even quadrupled since 1960. To learn more about clinical trial options for you, **contact us at 1-833-222-4884** to be connected to a Clinical Trials Navigator.

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Never hesitate to contact us, we're here to help!

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